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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,420	10/27/2003	Bryan David Haynes	19175	3355
23556	7590	03/22/2006	EXAMINER	
KIMBERLY-CLARK WORLDWIDE, INC. 401 NORTH LAKE STREET NEENAH, WI 54956			AN, SANG WOOK	
			ART UNIT	PAPER NUMBER
			1732	

DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/694,420	Applicant(s) HAYNES ET AL.	
	Examiner Sang W. An	Art Unit 1732	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 18-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/26/04 &amp; 4/25/05</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election of Claims 1-17 in the reply filed on 2/20/2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haynes et al (WO 02/052071) in view of Knight et al (6365088).

Regarding claim 1, Haynes et al teach a process for forming a nonwoven web (abstract) comprising: (a) providing a source of fibers (fig 1, 12), (b) subjecting said fibers to an electrostatic charge by passing said fibers through an electrostatic unit

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having a first side and a second side opposed to each other (fig 1, **18 & 22**), wherein the electrostatic unit has an array of protrusions on the first side (fig 1, **20**); (c) collecting said fibers on a forming surface to form a nonwoven web (fig 1, **32**).

However, Haynes et al does not teach the second side of the electrostatic unit having an array of protrusions. Nevertheless Knight et al teach both the second side of the electrostatic unit having an array of pins in forming a nonwoven web (col 7 lines 3-7 & 42-45 & fig 4). Knight et al teach that charge bars may include plurality of sets of four pins then he shows an embodiment in figure 4 where two charge bars are that are opposed to each other. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use the teachings of Knight et al in Haynes et al's method to control filament distribution in order to apply an electrostatic charge on a substrate (col 7 lines 16-19).

Refer to claim 1 rejection for dependent claims with limitation involving both sides having an array of protrusions.

Regarding claim 2, Haynes et al teach that the electrostatic charge generated between the array of protrusions of the first side and the array of protrusions of the second side and the array of protrusions of the first side and the array of protrusions of the second side are opposed to one another one (fig 1, **22 & 20**, also see claim 1 rejection).

Regarding claim 3, Haynes et al teach that the array of protrusions of the first side and the array of protrusions of the second side each comprise an array of pins (fig 1, also see claim 1 rejection).

Regarding claim 4, Haynes et al teach that the array of pins of the first side and the array of pins of the second side are recessed within a cavity of an insulating material such that the pins essentially do not extend beyond the insulating material (pg 13 lines 10-16, fig 2, **205**, also see claim 1 rejection).

Regarding claim 5, Haynes et al teach that the fibers are provided by a melt spinning process and the fibers are substantially continuous fibers (pg 4 lines 25-26).

Regarding claim 6, Haynes et al teach that the continuous fibers are subjected to pneumatic draw force in a fiber draw unit prior to being subjected to the electrostatic charge (pg 4 lines 26-27).

Regarding claim 7, Haynes et al teach deflecting the fibers with a deflecting device prior collecting the fibers on the forming surface (fig 1).

Regarding claim 8, Haynes et al teach that the fibers are substantially continuous fibers provided by melt spinning and are subjected to pneumatic draw force in a fiber draw unit prior to being subjected to said electrostatic charge (pg 4 lines 26-27), the array of protrusions of the first side and the array of protrusions of the second side each comprise an array of pins (fig 1, also see claim 1 rejection), the electrostatic charge is generated between the array of pins of the first side and the array of pins of the second side and the array of pins of the first side and the array of pins of the second side are opposed to one another one (pg 4 line 19, also see claim 1 rejection).

Regarding claim 9, Haynes et al teach that the array of pins of the first side and the array of pins of the second side are recessed within a cavity of an insulating material

such that the pins essentially do not extend beyond the insulating material (pg 13 lines 10-16, fig 2, **205**, also see claim 1 rejection).

Regarding claim 10, Haynes et al teach deflecting the fibers with a deflecting device prior collecting the fibers on the forming surface (fig 1).

Regarding claim 11, Haynes et al teach that the electrostatic charge is generated by a series of at least two separate electrostatic charge fields along a length of the electrostatic unit, each charge field having an array of protrusions on at least one of the first side or the second side of the electrostatic unit (fig 1, **18 & 22**, also see claim 1 rejection).

Regarding claim 12, Haynes et al teach everything in claim 12 but do not teach the second side of the electrostatic unit having an array of protrusions. Nevertheless Knight et al teach both the second side of the electrostatic unit having an array of pins in forming a nonwoven web (col 7 lines 3-7 & 42-45 & fig 4). Knight et al teach that charge bars may include plurality of sets of four pins then he shows an embodiment in figure 4 where two charge bars are that are opposed to each other. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use the teachings of Knight et al in Haynes et al's method to control filament distribution in order to apply an electrostatic charge on a substrate (col 7 lines 16-19).

Regarding claim 13, Haynes et al teach that a first charge field is generated by the array of pins on the first side of the electrostatic unit and a second charge field is generated by the array of pins on the second side of the electrostatic unit (fig 1, **18 & 22**, also see claim 1 rejection).

Regarding claim 14, Haynes et al teach that the first electrostatic charge field is generated between a first array of pins on the first side of the electrostatic unit and first array of pins on the second side of the electrostatic unit and a second electrostatic charge field is generated between a second array of pins on the first side of the electrostatic unit and a second array of pins on the second side of the electrostatic unit (fig 1, **18 & 22**, also see claim 1 rejection).

Regarding claim 15, Haynes et al teach that the first electrostatic field is generated from a potential on the first side of the electrostatic unit and the second electrostatic field is generated from a potential on second side of the electrostatic unit (fig 1).

Regarding claim 16, Haynes et al teach that the array of pins of the first side and the array of pins of the second side are recessed within a cavity of an insulating material such that the pins essentially do not extend beyond the insulating material (pg 13 lines 10-16, fig 2, **205**, also see claim 1 rejection).

Regarding claim 17, Haynes et al teach that the electrical potential is alternated from the protrusions on the first side to the protrusions on the second side and back to the protrusions on the first side (fig 1).

### ***Response to Argument***

The applicant argue that Ferencz (20020074089) does not anticipate either of claims 1 or 18 for at least the reason that it does not disclose of a charging unit utilizing an array of protrusions on both the first side and the second side of the unit.

Furthermore, the applicant argue that the charging member 34 is described at column 6,

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lines 4 through 13 as preferably comprising a plurality of individual corona charging pins 40 arranged in an offset grid. However, the opposite side wall 20 (the grounded member) does not include any array of pins, protrusions, or other structure that can in any way be interpreted as a protrusion. Applicant's arguments have been fully considered and are persuasive. Therefore the previous rejections of claims 1-27 have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Haynes et al (WO 02/052071) and Knight et al (6365088).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang W. An whose telephone number is (571) 272-1997. The examiner can normally be reached on Mon-Fri 7 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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Patent Examiner  
Art Unit 1732  
March 3, 2006



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**SUPERVISORY PATENT EXAMINER**